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TRAN, QUOC A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/577,956	**Applicant(s)** KJAER, HENRIK
	Examiner Quoc A. Tran	**Art Unit** 2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 May 2006*.

2a)□ This action is **FINAL**. 2b)☒ This action is non-final.

3)□ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)□ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-40* is/are rejected.

7)□ Claim(s) _____ is/are objected to.

8)□ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)□ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 May 2006* is/are: a)☒ accepted or b)□ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)□ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)□ Some * c)□ None of:

1.☒ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/577,956.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) □ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *05/02/2006 & 02/22/2007*.

4) □ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) □ Notice of Informal Patent Application

6) □ Other: _____.

DETAILED ACTION

This is a Non Final Office Action in responses to Preliminary Amendments filed 05/02/2006. The current patent application claims foreign priority to PA2003-01635 files ***11/03/2003*** and PA2004-01208 files 08/09/2004.

- Claims 21-40 are pending.
- Claims 1-20 are canceled.
- Claims 21 is independent claim.

In addition, the Examiner acknowledges Applicant's amendment to the specification filed 05/02/2006.

Information Disclosure Statement

The signed and dated copies of applicant's IDSs, which were filed on 05/02/2006 and 02/22/2007, are attached to this Office Action.

Claims Rejections – 35 U.S.C. 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> ***The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.***

Claims 24 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, because of the following reason:

Claims *24 and 32* recite the limitation "***e.g.***" and "***such as***", render the claims indefinite, because the terms "*e.g.*" and "such as" means "*for example*"; which are not clearly define the claim terms. Thus one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In the interest of compact prosecution, the application is further examined against the prior art, as stated below, upon the assumption that the applicants may overcome the above stated rejections under 35 U.S.C. 112.

Claims Rejection – 35 U.S.C. 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> ***(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.***

Claims 21-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Naimat** et al., (US 20050039114A1-Provisional 60/487,685 filed 07/16/2003) [hereinafter "Naimat"], in view of **Spencer** et al., (US005603021A - filed 09/02/1994) [hereinafter "Spencer"].

Regarding ***independent claim 1***, Naimat teaches:

> **An electronic mathematical model builder comprising a memory for storage of data, a processor for defining addressable sets of cells stored in**

the memory with a unique identifier, for entering data into the cells and for processing data stored in the cells,

(At Para 38→ Naimat discloses this limitation, as clearly indicated in the cited text [e.g., ***Model designer users 200 can write formulas*** using the imported data as well as ***user-entered spreadsheet data*** in the manner typically used in spreadsheet applications [e.g., entering data into the cells and for processing data stored in the cells]. Also Naimat further discloses a user specifies a name for the imported data into the currently opened workbook in the spreadsheet application 205; the **cell** range containing that data is named by the name provided, using spreadsheet's named **cells** capability. The named **cells** capability allows the spreadsheet application 205 to access **cells *by referencing a name***, rather than row and column information. Further, each column of the imported data is given a name based on the provided name and the column name for the data from the database 225 (name; column) [@ Para 41].)

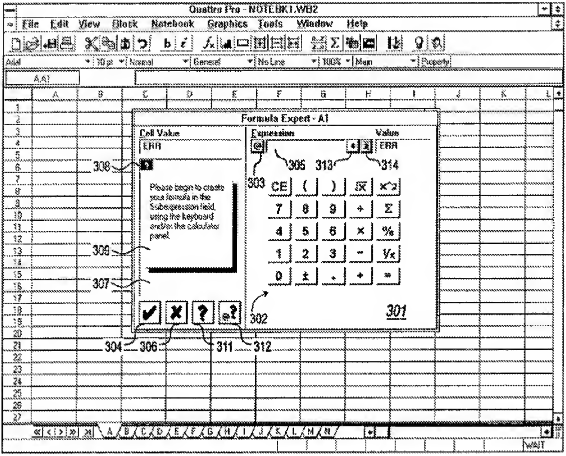
a user interface with a display for displaying sets of cells in a work area and means for creating and positioning sets of cells in the work area and means for specifying data to be entered into the cells, and a set of destination cells for containing values of the function.

(At Figure 4 and at Para 64 → Naimat discloses this limitation, as clearly indicated in the cited text [e.g., ***a worksheet for display*** as a web page @ step 405 of Fig 4, includes selecting a worksheet from the model [e.g., a user interface with a display), the cell value instances for the cells on the worksheet, and the corresponding set of cell objects associated with the cells on the worksheet. In an embodiment of the invention, worksheets in the model are processed sequentially to provide a guided data entry process to model users.])

In addition Naimat does not expressly teach, but Spencer teaches:

a function builder for building mathematical relations between cells, comprising fields for user specification of a desired function by mathematical operators and input variables of the function,

(At Figure 3A and at the Abstract → Spencer discloses an electronic spreadsheet system includes a ***Formula Composer*** having a preferred interface and methods for assisting a user with composing spreadsheet formulas]. Also Spencer further teaches the Spreadsheet formulas include a desired function by ***mathematical operators*** [e.g., **operators** such as -, +, *, /, and the like] and input variables of the function [@ Col. 11 line 10- Col. 12 line 55 and @ Col. 2 Lines 22-38].



Please begin to create your formula in the Subexpression field, using the keyboard and/or the calculator panel.

FIG. 3A

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Naimat's spreadsheet formula model builder engine, to include a means of said a function builder for building mathematical relations between cells, comprising fields for user specification of a desired function by mathematical operators and input variables of the function, as taught by Spencer; because they are both from the analogous art of composing spreadsheet formula model in a spreadsheet engine. Therefore, the artisan would have well appreciated that Spencer relates to general method of modeling spreadsheet formula in Naimat. This is done in an iterative manner that enabling an electronic spreadsheet system to compose spreadsheet formulas as model, then saves the model to the database using the persistence add-on. When recompute the spreadsheet, the values are stored to the database and the view is recomputed reusing the same spreadsheet formulas model [@ Para 38-39 of Naimat].

Claims 22-23,

Naimat and Spencer teach the method of claim 21 and further comprise:

> **wherein the function builder comprises components for selection by the user for specification of the function; wherein at least one component is a function component selected from the GROUP CONSIITNG mathematical operators, mathematical functions, logical and Boolean functions, financial functions, string functions, and data base functions.**

([@ Col. 11 line 10- Col. 12 line 55 and @ Col. 2 Lines 22-38→ Spencer discloses the Spreadsheet formulas include a desired function by ***mathematical operators*** [e.g., **operators** such as -, +, *, /, and the like] and input variables of the function [@ Col. 11 line 10- Col. 12 line 55 and @ Col. 2 Lines 22-38].

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Naimat's spreadsheet formula model builder engine, to include a means of said the function builder comprises components for selection by the user for specification of the function; wherein at least one component is a function component selected from the GROUP CONSIITNG mathematical operators, mathematical functions, logical and Boolean functions, financial functions, string functions, and data base functions, as taught by Spencer; because they are both from the analogous art of composing spreadsheet formula model in a spreadsheet engine. Therefore, the artisan would have well appreciated that Spencer relates to general method of modeling spreadsheet formula in Naimat. This is done in an iterative manner that enabling an electronic spreadsheet system to compose spreadsheet formulas as model, then saves the model to the database using the persistence add-on. When recompute the spreadsheet, the values are stored to the database and the view is recomputed reusing the same spreadsheet formulas model [@ Para 38-39 of Naimat].

Claim 24,

Naimat and Spencer teach the method of claim 23 and further comprise:

wherein the function component is a Java class that encapsulates the calculation of a specific function, e.g. a financial OR mathematical function, and the data that is input for the function.

(@ Para 56→ Naimat discloses this limitation, as clearly indicated in the cited text [e.g., reads and parses the cell formulas, and named range information, and generates a SQL spreadsheet query that represents the formula computation. The generated query is not a complete query, using as a Java stored procedure]; and also discloses @ Para 62, the implementation as a JSPs and Java classes.])

Claim 25,

Naimat and Spencer teach the method of claim 22 and further comprise:

wherein at least one component is a data component including data of a set of cells.

(@ Para 27→ Naimat discloses this limitation, as clearly indicated in the cited text [e.g., Model database 135 stores the model and its associated data objects, such as calculator objects, and the set of cell objects].)

Claim 26,

Naimat and Spencer teach the method of claim 25 and further comprise:

wherein the data component is a Java class that holds an object reference to a specific data source, e.g. a set of cells OR an external database.

(@ Para 56→ Naimat discloses this limitation, as clearly indicated in the cited text [e.g., reads and parses the cell formulas, and named range information, and generates a SQL spreadsheet query that represents the formula computation. The generated query is not a complete query, using as a Java stored procedure] and also discloses @ Para 62, the implementation as a JSPs and Java classes.])

Claim 27,

Naimat and Spencer teach the method of claim 25 and further comprise:

further comprising data components including data from an external data source.

(@ Para 104→ Naimat discloses this limitation, as clearly indicated in the cited text [e.g., the modeling tools introduce named references for cells and cell ranges represent data from external tables, a SQL reference spreadsheet is an appropriate representation.])

Claim 28,

Naimat and Spencer teach the method of claim 21 and further comprise:

wherein the function builder comprises graphical symbols relating to respective components for selection by the user to be incorporated into the desired function.

(@ Para 102→ Naimat discloses this limitation, as clearly indicated in the cited text [e.g., the reference data includes formulas that reference other data in the spreadsheet. This embodiment requires that the reference spreadsheet pull in the SQL rules corresponding to those formulas and any dependent cells.] Also Naimat further discloses model designer users 200 can write formulas using the imported data as well as user-entered spreadsheet data in the manner typically used in spreadsheet applications [e.g., entering data into the cells and for processing data stored in the cells] [@ Para 38].)

Claims 29-30,

Naimat and Spencer teach the method of claim 28 and further comprise:

> **wherein the graphical symbols relating to respective components are organized under various tabs according to their type; wherein the graphical symbols relating to respective components are organized in a graphical, hierarchical diagram according to their type.**

(@ Col. 11 lines 10-25→ Spencer discloses Formula Composer 136 is a visual tool for creating, editing, and debugging spreadsheet formulas; wherein composer a function panel to facilitate input of @-functions and their arguments. With these different views, the user can easily choose the right @-functions and enter all necessary information correctly. Also Spencer further discloses the graphical symbols relating to respective components are organized in a graphical, hierarchical diagram according to their type [@ Col. 23 lines 15-25].)

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Naimat's spreadsheet formula model builder engine, to include a means of said the graphical symbols relating to respective components are organized under various tabs according to their type; wherein the graphical symbols relating to respective components are organized in a graphical, hierarchical diagram according to their type, as taught by Spencer; because they are both from the analogous art of composing spreadsheet formula model in a spreadsheet engine. Therefore, the artisan would have well appreciated that Spencer relates to general method of modeling spreadsheet formula in Naimat. This is done in an iterative manner that enabling an electronic spreadsheet system to compose spreadsheet formulas as model, then saves the model to the database using the persistence add-on. When recompute the spreadsheet, the values are stored to the database and the view is recomputed reusing the same spreadsheet formulas model [@ Para 38-39 of Naimat].

Claim 31,

Naimat and Spencer teach the method of claim 28 and further comprise:

wherein components are selected by dragging and dropping the corresponding graphical symbols into the function field of the function builder.

(@ Col. 7 lines 25-40 and @ Col. 11 lines 10-25→ Spencer discloses Formula Composer 136 is a visual tool for creating, editing [e.g. cut/paste], and debugging spreadsheet formulas; wherein composer a function panel to facilitate input of @-functions and their arguments. With these different views, the user can easily choose the right @-functions and enter all necessary information correctly.)

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Naimat's spreadsheet formula model builder engine, to include a means of said components are selected by dragging and dropping the corresponding graphical symbols into the function field of the function builder, as taught by Spencer; because they are both from the analogous art of composing spreadsheet formula model in a spreadsheet engine. Therefore, the artisan would have well appreciated that Spencer relates to general method of modeling spreadsheet formula in

Naimat. This is done in an iterative manner that enabling an electronic spreadsheet system to compose spreadsheet formulas as model, then saves the model to the database using the persistence add-on. When recompute the spreadsheet, the values are stored to the database and the view is recomputed reusing the same spreadsheet formulas model [@ Para 38-39 of Naimat].

Claim 32,

Naimat and Spencer teach the method of claim 28 and further comprise:

wherein the function builder comprises tools for specification of calculation type, such as by row, by column, all cells in a panel, selected cells in a panel, accumulated OR non-accumulated.

(@ Col. 7 lines 25-40 and @ Col. 11 lines 10-25→ Spencer discloses Formula Composer 136 is a visual tool for creating, editing [e.g. cut/paste], and debugging spreadsheet formulas; wherein composer a function panel to facilitate input of @-functions and their arguments. With these different views, the user can easily choose the right @-functions and enter all necessary information correctly.)

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Naimat's spreadsheet formula model builder engine, to include a means of said the function builder comprises tools for specification of calculation type, such as by row, by column, all cells in a panel, selected cells in a panel, accumulated OR non-accumulated, as taught by Spencer; because they are both from the analogous art of composing spreadsheet formula model in a spreadsheet engine. Therefore, the artisan would have well appreciated that Spencer relates to general method of modeling spreadsheet formula in Naimat. This is done in an iterative manner that enabling an electronic spreadsheet system to compose spreadsheet formulas as model, then saves the model to the database using the persistence add-on. When recompute the spreadsheet, the values are stored to the database and the view is recomputed reusing the same spreadsheet formulas model [@ Para 38-39 of Naimat].

Claims 33-35,

Naimat and Spencer teach the method of claim 21 and further comprise:

the user interface comprises means for naming functions built with the function builder; and means for storage and retrieval of functions in the memory; and means for storing a selected part of the model in the memory.

(@ Col. 11 line 10- Col. 12 line 55 and @ Col. 2 Lines 22-38→ Spencer discloses the Spreadsheet formulas include a desired function by mathematical operators [e.g., operators such as -, +, *, /, and the like] and input variables of the function [@ Col. 11 line 10- Col. 12 line 55 and @ Col. 2 Lines 22-38]. Also Spencer further discloses the spreadsheet defines an addressable storage location or "cell" at each intersection of a row with a column [@ Col. 7 lines 40-55].) .

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Naimat's spreadsheet formula model builder engine, to include a means of said the user interface comprises means for naming functions built with the function builder; means for storage and retrieval of functions; and means for storing a selected part of the model, as taught by Spencer; because they are both from the analogous art of composing spreadsheet formula model in a spreadsheet engine. Therefore, the artisan would have well appreciated that Spencer relates to general method of modeling spreadsheet formula in Naimat. This is done in an iterative manner that enabling an electronic spreadsheet system to compose spreadsheet formulas as model, then saves the model to the database using the persistence add-on. When recompute the spreadsheet, the values are stored to the database and the view is recomputed reusing the same spreadsheet formulas model [@ Para 38-39 of Naimat].

Claims 36-37,

Naimat and Spencer teach the method of claim 21 and further comprise:

> **wherein a first function may be an input variable to a second function; wherein the function builder further comprises tools for user definition of a mathematical operator.**

([@ Col. 11 line 10- Col. 12 line 55 and @ Col. 2 Lines 22-38→ Spencer discloses the Spreadsheet formulas include a desired function by mathematical operators [e.g., operators such as -, +, *, /, and the like] and input variables of the function [@ Col. 11 line 10- Col. 12 line 55 and @ Col. 2 Lines 22-38].

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Naimat's spreadsheet formula model builder engine, to include a means of said a first function may be an input variable to a second function;

wherein the function builder further comprises tools for user definition of a mathematical operator, as taught by Spencer; because they are both from the analogous art of composing spreadsheet formula model in a spreadsheet engine. Therefore, the artisan would have well appreciated that Spencer relates to general method of modeling spreadsheet formula in Naimat. This is done in an iterative manner that enabling an electronic spreadsheet system to compose spreadsheet formulas as model, then saves the model to the database using the persistence add-on. When recompute the spreadsheet, the values are stored to the database and the view is recomputed reusing the same spreadsheet formulas model [@ Para 38-39 of Naimat].

Claims 38-39,

Naimat and Spencer teach the method of claim 21 and further comprise:

further including tools for saving a model document as a standalone Java .jar file; and further including tools for saving a model document as a standalone application, e.g. a Java Applet, a serverside application e.g. a Java Servlet OR an .exe file.

(@ Para 56→ Naimat discloses this limitation, as clearly indicated in the cited text [e.g., reads and parses the cell formulas, and named range information, and generates a SQL spreadsheet query that represents the formula computation. The generated query is not a complete query, using as a Java stored procedure [e.g. Java file]; and also discloses @ Para 62, the implementation as a JSPs and Java classes.])

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Claim 40,

Naimat and Spencer teach the method of claim 21 and further comprise:

further including tools for documenting the structure of a specific model document.

(@ the Abstract→ Naimat discloses this limitation, as clearly indicated in the cited text [e.g., Users can create computational models in a spreadsheet application and automatically apply the model to data stored in a relational database. The SQL model and its associated data are stored in the database, and the model can be executed on a different set of data.])

It is noted that any citations to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. See, MPEP 2123.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- **Kotler** et al., ("US 20090083615A1Division of 09/599,808- filed 06/21/2000)→ Kotler discloses the spreadsheet engine 112 has a grid object for each table and free floating field in the document; the spreadsheet engine further provides the ***formula creation, reference editing, recalculation***, and the like (Kotler at Para 43, also see Fig. 3A).

- **Adler** et al., ("US006138130 - filed 06/15/1998)→ Adler teaches a system and method that automatically enter an object, or a formula, or a set of formulas, or even an entire definition of a cell field into a visual presentation which the user wishes to view. Thus, the remaining lines of the script file illustrated in FIG. 7b will automatically load the newly defined complex numbers into cells A1, B1 and C1 and automatically associate the result of various different operations performed on those cells with the corresponding cells containing the operative formulas [@col. 28, lines45-65; also see Fig 7b of Adler].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quoc A. Tran whose telephone number is 571-272-8664. The examiner can normally be reached on Mon through Fri 8AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on (571)272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Quoc A. Tran/
Examiner, Art Unit 2176

/DOUG HUTTON/
Supervisory Patent Examiner, Art Unit 2176